

Claims

- [c1] 1. An apparatus for monitoring environmental characteristics of an industrial personal computer, of the type having a host CPU therein, the apparatus comprising: an alarm card, disposed in said industrial personal computer and coupled to said host CPU; the alarm card having an alarm card microprocessor therein which runs an alarm card server, capable of handling web-based content; the alarm card having an out-of-band connection to a network; the alarm card also having an internal connection to the host CPU; via the internal connection, the alarm card server monitors the host CPU web-based content on the host CPU; and, via the out-of-band connection, the alarm card reports, to an external network, information contained in web-based content on the host CPU .
- [c2] 2. An apparatus of claim 1 wherein said information is remotely programmable environmental characteristics of said industrial personal computer.

- [c3] 3. An apparatus of claim 2 wherein said remotely programmable environmental characteristics are remotely programmable via an in-band network connection between the host CPU and an external network.
- [c4] 4. An apparatus of claim 3 wherein said alarm card includes an alarm card memory having therein a web page cache for storing environmental status web pages obtained from said host CPU.
- [c5] 5. An apparatus of claim 4 wherein said environmental status web pages are available to an external network, via the out-of-band connection, despite any crash that may have occurred on host CPU.
- [c6] 6. A method of monitoring a remote industrial computer comprising the steps of:
providing a remote industrial computer, having a host CPU;
providing an administrator computer;
providing a first network connection between said remote industrial computer and said administrator computer; and,
providing, on said remote industrial computer, an alarm card with a server thereon for monitoring pages contained on said host CPU.

- [c7] 7.A method of claim 6 further comprising the steps of:
editing said pages on said host CPU via said first network connection.
- [c8] 8.A method of claim 7 further comprising the step of:
saving in a memory cache on said alarm card said pages.
- [c9] 9.A method of claim 8 further comprising the steps of:
reporting information from said pages to said administrator computer via the second network connection during a time when said first network connection is inoperable due to a failure of said host CPU.
- [c10] 10.A method of claim 9 further comprising the steps of:
analyzing said information from said pages and making a determination relating to said failure of said host CPU;
and,
restarting said host CPU via said second network connection.
- [c11] 11.A method of claim 10 further comprising the steps of
making changes to software on said remote industrial computer, after restarting said host CPU, wherein said changes are effected by said determination.
- [c12] 12.An apparatus for extending operational characteristics of an environmental monitor for an industrial PC

comprising:

an industrial PC;

a second PC;

first network means for exchanging information between said industrial PC and said second PC;

second network means for exchanging information between said industrial PC and said second PC, so that said second network means is operable despite an operational failure of said first network means;

means for hosting a page on said industrial PC; and,

means, internal to said industrial PC, for monitoring said page and providing related information on said second network means.

[c13] 13. An apparatus of claim 12 wherein said means for hosting a page permits changes to be made to the page from a location not co-located with said industrial PC.

[c14] 14. An apparatus of claim 1 wherein said alarm card has both ISA bus connections and PCI bus connections thereon and further such that the ISA bus connections are on an opposite side of said alarm card from said PCI bus connections.

[c15] 15. An apparatus of claim 5 wherein said alarm card has both ISA bus connections and PCI bus connections thereon and further such that the ISA bus connections

are on an opposite side of said alarm card from said PCI bus connections.

[c16] 16. An apparatus of claim 6 wherein said alarm card has both ISA bus connections and PCI bus connections thereon and further such that the ISA bus connections are on an opposite side of said alarm card from said PCI bus connections.

[c17] 17. An apparatus of claim 11 wherein said alarm card has both ISA bus connections and PCI bus connections thereon and further such that the ISA bus connections are on an opposite side of said alarm card from said PCI bus connections.

[c18] 18. An apparatus of claim 13 wherein said means, internet to said industrial PC, for monitoring is an alarm card; and wherein said alarm card has both ISA bus connections and PCI bus connections thereon and further such that the ISA bus connections are on an opposite side of said alarm card from said PCI bus connections.